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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,385	02/28/2002	Hiroshi Sakamoto	381NP/50859	8361

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EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,385

Applicant(s)

SAKAMOTO ET AL.

Examiner

David D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the fourth Office action on the merits of Application No. 10/084,385, filed on 28 February 2002. Claims 1-3 and 14-18 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 02/28/02
 - Foreign Priority Document, received on 02/28/02
 - Translation of Foreign Priority Document, received on 07/07/04
 - Information Disclosure Statement, received on 08/26/04

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 2, 3/2, and 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 1-3 and 14-18:

- Claim 2, line 15 recites the limitation "said friction clutch". It is unclear whether applicant is referring to the first friction clutch or the second friction clutch.

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- Claim 16, lines 14-15 recite the limitation “said friction clutch”. It is unclear whether applicant is referring to the first friction clutch or the second friction clutch.
- Claims 14, 15, and 17 recite “when a transmission step before gear-shifting is lower than that after gear-shifting.” It is unclear whether applicant is referring to the amount of torque, which is absorbed by one of the motors from the output shaft, is lower prior to gear-shifting than after gear-shifting or the shifting of the sequential gear ratios.

Double Patenting

5. Applicant is advised that should claim 3/2 be found allowable, claim 18 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1-3 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/26559.

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following claim rejections, the examiner will refer to the equivalent English version of the WO 00/26559, U. S. Patent 6,712,734 to Loeffler.

Claims 1-3 and 14-18:

Loeffler (Fig. 1; column 1, line 66 – column 5, line 48) discloses a multi-speed transmission comprising:

- An engine, (11);
- A gear-type transmission (10);
- A first input shaft (12 or 13);
- A first clutch (29 or 30);
- A second input shaft (12 or 13);
- A second clutch (29 or 30);
- An output shaft (25);
- A plural numbers of gear trains provided between said first input shaft and said output shaft and between said second input shaft and said output shaft (Fig. 1);
- A plurality of claw clutches provided on said gear trains (Fig. 1; being elements in the vicinities of reference numbers 23 and 28);
- A first motor (34 or 35) connected to said first input shaft;
- A second motor (34 or 35) connected to said second input shaft;

- A battery (i.e., column 3, line 20);
- Wherein either one of said first motor and said second motor is driven so as to suppress torque fluctuation on said output shaft after torque by said second friction clutch coincides substantially with output shaft torque of said engine in conducting gear-shift through a change-over from said first friction clutch to said second friction clutch (i.e., column 3, line 47 – column 4, line 34);
- Wherein either one of said first motor and said second motor is driven so that torque fluctuation on said output shaft is suppressed after an increase in a pressing force upon said second friction clutch or an decrease in a pressing force upon said first friction clutch starts in conducting gear-shift through a change-over from said first friction clutch to said second friction clutch (i.e., column 3, line 47 – column 4, line 34);
- Wherein said first or second motor is driven so as to absorb torque from said output shaft (i.e., column 3, line 47 – column 4, line 34);
- Wherein said first or second motor is driven so as to supply torque to said output shaft (i.e., column 5, lines 24-48); and
- Wherein either one of said first motor or said second motor is driven so that wear-out of said claw clutch is inherently suppressed by controlling a rotating speed of either one of said first input shaft and said second input shaft, when conducting gear-shift through change-over of said gear trains with said claw clutch (i.e., column 3, line 47 – column 4, line 2).

Response to Arguments

6. Applicant's arguments filed on 12 April 2005 have been fully considered but they are not persuasive.

Applicant argues that WO'559 reference does not recognize the problems to be solved in absorbing or correcting the drawn change in torque generated with the start of engagement of the friction clutch when gear-shifting through the change-over of the twin-clutch is performed, the thrust change in torque due to the inertia of the engine, or the drawn change in torque due thereto.

Examiner recognizes the differences between the applied reference and the applicant's disclosed invention. However, the present claims do not reflect this argument. More specifically, the present claims are directed to suppressing the torque fluctuation on the output shaft of the transmission, in conducting a gear-shifting.

Accordingly, as set forth above, WO'559 reference meets the claimed limitations.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
ART UNIT 3681